Commodity Highlight

Hazelnut or Filbert—Two Names for the Same Nut

The hazelnut, also called the filbert, originated along the Black Sea region around Turkey through the Mediterranean region in Italy and Spain. Today, this region is still the center of hazelnut production, with Turkey producing about 60 percent of the world's total. The United States ranks third in production, behind Italy but ahead of Spain (fig. 6).

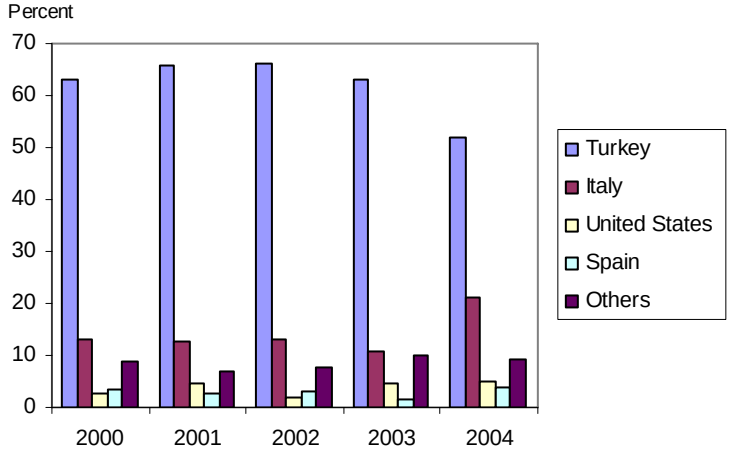
Production in the United States is concentrated in Oregon. There is also a small amount of production in Washington State. However, data are not available for Washington. In terms of tree nuts grown in the United States, hazelnut production is the smallest crop. In Oregon, however, it is the only tree nut produced on a commercial basis.

In 2005 and 2006, hazelnuts grew on 28,300 bearing acres, slightly lower than in 2004 but more than any time prior to 1995. The industry has been battling Eastern Filbert Blight (EFB), a fungal disease that reduces production and eventually kills the trees, as well as urbanization, which has been limiting available acreage. The industry is developing new varieties that show resistance to EFB, and while acreage increases may be limited by competition for land use and demand factors, many growers are removing the EFB-infected orchards and replanting with new varieties. With ongoing research into more-resistant varieties, the industry continues to respond with new plantings, and boosting the health of the industry.

Hazelnuts are an important crop for Oregon. Between 2003 and 2005, cash receipts for Oregon's hazelnuts averaged $62 million, less than pears but higher than other fruit and tree nut crops the State is known for, such as cherries, grapes, and apples.

Figure 6

World hazelnut production by country, 2000-04



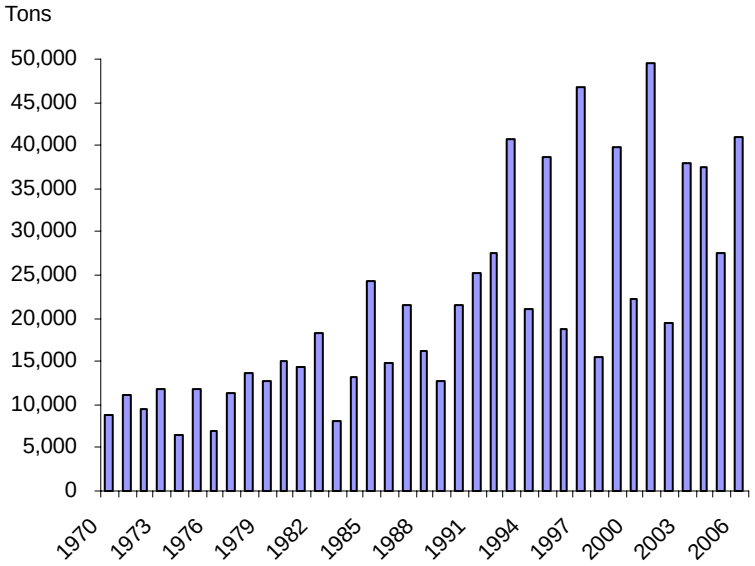
Source: United Nations' Food and Agriculture Organization http://faostat.fao.org/.

Oregon's Production Continues Upward Trend

Hazelnut trees are by nature alternate-bearing—that is, if there is a big crop one year the following year's crop will likely be considerably smaller as the trees regain their energy. In Oregon, while the alternate-bearing nature of the trees' production is evident, the trend in production has been steadily upward since the 1970s (fig. 7). While the number of bearing acres has been on an upward trend since 1983, the big spikes in production have been driven by record high yields produced in 1993, 1997, and 2001 (fig. 8). In 2003 the number of bearing acreage dropped to the lowest level in 8 years as a result of orchards being removed due to damage from EFB.

Production is concentrated in Oregon's Willamette Valley. This area provides the ideal climate for hazelnut production. It has a moderate climate similar to the Black Sea region, which is necessary to produce the crop because the trees blossom in mid winter. At the same time, this area provides sufficient numbers of chill hours without frequent extreme cold temperatures, all necessary conditions for the blooms to mature into nuts. Yamhill, Marion, Washington, Clackamas, and Lane counties account for most of the hazelnut acreage in the State. While Yamhill, Marion, and Clackamas have the most trees, Marion has the greatest number of hazelnut operations (having orchards with 50 or more trees), followed by Yamhill and Washington. The number of operations declined 5 percent between 2000/01 and 2004/05 as growers left the industry due to EFB.

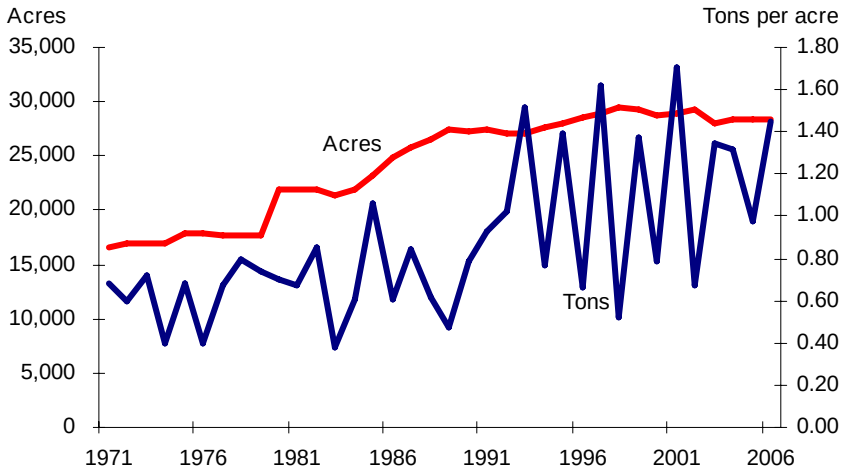
Figure 7
U.S. hazelnut production, 1970-2006



Source: USDA, National Agricultural Statistics Service, *Noncitrus Fruit and Tree Nuts Summary*, various issues.

Figure 8

Hazelnut bearing-acres and yields per acres, 1970-2006



Source: USDA, National Agricultural Statistics Service, *Noncitrus Fruit and Tree Nuts Summary*, various issues.

With the Eastern Filbert Blight such an issue in hazelnut production, growers have been planting new, more-resistant tree varieties developed at Oregon State University. The Barcelona variety still dominates plantings, accounting for about 67 percent of all trees in 2004/05. In recent years, however, new varieties such as the Lewis, which has shown to be resistant to EFB, has begun to be planted at a more rapid pace. While each variety produces slightly different size and shape of nuts, the Lewis is compatible with the Barcelona, the industry standard, for marketing purposes.

Hazelnuts Marketed Inshell Bring the Highest Price

Hazelnuts are sold inshell or as kernels—whole, diced, sliced, ground into flour, or paste. The highest quality and highest valued nuts are those sold inshell. According to the industry, the domestic inshell hazelnut market brings growers the highest price. Since domestic demand for hazelnuts is not very high, by limiting the quantity going to the U.S. market as inshell prevents oversupply and its affiliated price effects. To help maintain grower prices, the Oregon industry created the Hazelnut Marketing Board (HMB) which is administered by USDA's Agricultural Marketing Service under a Federal marketing order. The order contains volume controls and quality regulations governing hazelnuts sales each year. The board makes an annual determination to have regulations in effect. The regulations determine the quantity of the year's crop that can be sold inshell to the U.S. market. This percentage is called free, because the handler can sell it any way it wants, the remaining share is called restricted because its use is restricted to shelling or exporting. For the 2006/07 crop, the HMB established 8.3 percent of the crop as free and 91.7 percent as restricted.

Inshell hazelnuts have the longest shelf life among the different forms in which the nut is marketed. An important market for inshell hazelnuts is the snack market, the highest value among all the uses. Inshell nuts are also sold to processors who store the nuts to have sufficient supplies during the off-cycle years. Since hazelnut production is on an alternate bearing cycle, processors buy more nuts than they need

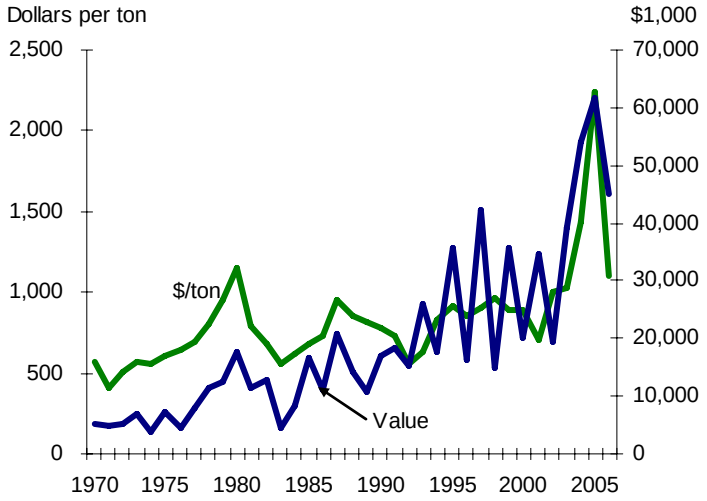
during an "on"cycle when more is available and less expensive, to use during the "off" years. Shelled hazelnuts are sold in many forms, including whole kernels that are roasted, blanched, or natural, as well as in diced, paste, meal, and oil forms. Different forms have different uses. The most popular use for hazelnuts is with chocolate—in candies and hazelnut butter products. Diced, meal, and paste hazelnuts are sold to be used in making baked goods, cakes and cookies, and well as for ice cream. The oils are used in high-end restaurants, for home cooking, and in salads. Whole kernels are used as snack food, either alone or in mixed nuts.

Grower Price Increases Steadily Over Past 3 Decades

The average price per ton of hazelnuts has steadily increased from the 1970s through the mid-2000s, growing at an annual average rate of 4 percent and reaching an all-time high in 2005 (fig. 9). At the same time, the value of the crop increased at an average rate of 21 percent annually. The quantity of hazelnuts produced and stocks play an important role in the price growers receive per ton each year. Since the biggest share of each year's crop is exported, however, Turkey's and Italy's production play critical roles in establishing the world price and therefore influences the price U.S. hazelnut growers will receive for their crop each year. While the value of the U.S. annual crop is correlated with the size of each season's crop, this pattern has become very strong since the mid-1990s. A deviation from this pattern is apparent in 2004 and 2005 when U.S. prices responded to a shortage in world supplies after several years of below average production in Turkey. In 2006, Turkey's crop returned to normal size at the same time the U.S. crop was the biggest in 5 years. As a result, U.S. prices dropped by about a half and the value of the crop in 2006 fell to $45.1 million, lower than the previous 2 years but still the third highest on record.

Figure 9

Hazelnut grower price and crop value, 1970-2006



Source: USDA, National Agricultural Statistics Service, *Noncitrus Fruit and Tree Nuts Summary*, various issues.

U.S. Hazelnut Industry Is Third-Biggest in World Market

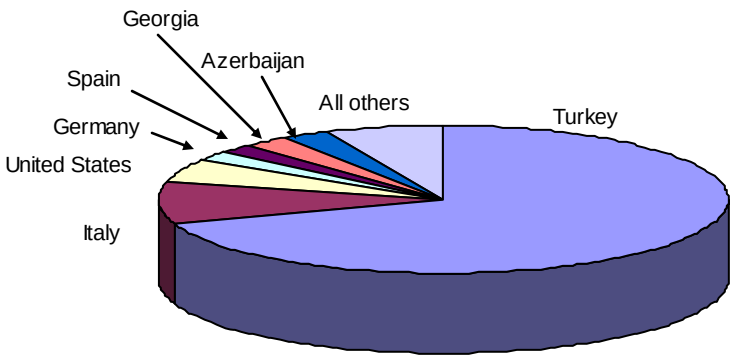
The United States ranks third behind Turkey and Italy in providing the world with hazelnuts, but the U.S. share of the market is significantly smaller than Turkey's share (fig. 10). During the first half of the 2000s, Turkey accounted for an average of 70 percent of all hazelnuts on the world market, Italy 10 percent and the United States 5 percent. Germany, Spain, Georgia, Azerbaijan, France, Belgium, and China round out the top 10 hazelnut exporters. Germany and Belgium do not produce hazelnuts, but act as transhippers to other European countries.

Turkey produces more hazelnuts than its citizens consume. As a result, it exports much of each year's production. To help maintain grower prices, Turkey's hazelnut growers cooperative, FISKOBIRLIK, purchases much of the crop, setting the market price, and maintaining stocks so that supplies will not flood the market during surplus production years. Until 2003, FISKOBIRLIK was run by the Government of Turkey, funding the cooperatives purchases. Since going private, the cooperative has had financial problems and cannot always pay its producers. Also, other channels have opened up in Turkey, purchasing hazelnuts at often higher prices and reducing the influence FISKOBIRLIK may have on prices in the future. Turkey also finances the Istanbul Hazelnut and Products Exporters Union which coordinates a share of Turkey's hazelnut exports. Virtually all of Turkey's hazelnut exports are shipped to Europe, with Germany, Italy, and France as the major recipients.

In the United States, an average of half of each year's hazelnut supplies (production plus stocks and imports) is exported. In recent years, between a half and two-thirds of the exports are inshell hazelnuts (on a shelled basis). Since 2000, Hong Kong has been the major export market for U.S. inshell hazelnuts, accounting for over 50 percent of the total. Much of what is being shipped to Hong Kong is said to likely wind up in China. The Hong Kong market barely existed prior to 1993, when Germany was the major destination for hazelnut exports. Germany remains the

Figure 10

Major hazelnut exporters, by country, 2000-04 average



Source: United Nations' Food and Agriculture Organization http://faostat.fao.org/.

second-biggest market, receiving an average of 13 percent of the total shipments throughout the 2000s, followed by Italy, Canada, and Spain, although their order shifts from year to year. These 5 countries account for about 85 percent of the export shipment of U.S. inshell for the past 6 years.

International markets for shelled hazelnuts vary annually. In 2005, Canada received about 30 percent of the shipments and was the leading destination for export, followed by Israel, Mexico, and Australia. In 2003 and 2004, however, Hong Kong was the major destination, receiving 70 percent of the shipments in 2003 but just 28 percent in 2004. Canada and Israel were among the other big markets.

Imports Trending Up Since Late 1990s

Although the annual quantity of hazelnut imports generally demonstrates an inverse relationship to the quantity of nuts produced that year, the overall trend is for increased imports, especially since the late 1990s. While imports peaked at 16 million pounds in 2002/03 in response to very low U.S. production, they have been averaging about 12.5 million pounds annually since 1998, about 68 percent higher than the average quantity imported during the rest of the nineties. Despite the growth in recent years, imports still average about half the amount of exports each year during the 2000s. While shelled hazelnuts account for about three-quarters of the imports, their share of the total has been declining in recent years as importers have been increasing their shipments of prepared and preserved and inshell hazelnuts. Imported hazelnuts are used in making snack foods, with many hazelnut importers also importing dried fruit and other nuts, as well as an ingredient in chocolates, baking, ice cream, and other items such as the popular hazelnut/chocolate spread Nutella. The import data underestimates hazelnut consumption in the United States because the data are not able to capture hazelnuts as an ingredient in imported processed products, especially chocolates.

Americans Consume Fewer Hazelnuts Relative to Other Tree Nuts

Hazelnut consumption is low in the United States relative to other tree nuts. Throughout the 2000s, per capita consumption has averaged about 0.06 pound, less than any other domestically-produced tree nut. In comparison, Americans consumed about 1 pound of almonds and half a pound of walnuts a year during the same time. Hazelnuts are not as often used in nut mixes, a popular nut snack in the United States, as other tree nuts, contributing to the lower level of consumption. In 2005/06, despite sufficient supply availability to maintain the average quantity of domestic use, consumption fell to 0.03 pounds per capita as a result of a record-high quantity shipped to export markets (table 20). Domestic use will likely increase in the coming season as export demand for U.S. hazelnuts slackens with an anticipated bigger Turkey crop. The hazelnuts consumed from imported confectionaries are not included in the consumption data and therefore domestic use is likely undercounted as it is for most tree nuts consumed in imported candies and other processed products.

Table20--Hazelnuts (filberts): Supply and utilization (shelled basis), 1990/91 to date

Season 1/	Utilized production	Loss and exempt	Marketable production 2/	Imports 3/	Beginning stocks 4/	Total supply 5/	Ending stocks 4/	Exports 3/	Domestic consumption	
									Total	Per capita
				----------*1,000 pounds* ----------						*Pounds*
1990/91	15,537	1,869	13,668	10,116	579	24,364	1,098	5,618	17,647	0.07
1991/92	19,866	943	18,923	6,173	1,098	26,194	3,026	8,213	14,955	0.06
1992/93	22,132	1,073	21,059	8,808	3,026	32,893	2,956	9,289	20,648	0.08
1993/94	32,464	1,471	30,993	7,835	2,956	41,784	1,687	14,354	25,743	0.10
1994/95	16,960	1,066	15,894	12,284	1,687	29,865	438	10,423	19,004	0.07
1995/96	30,186	1,591	28,595	11,182	438	40,214	4,085	13,268	22,861	0.09
1996/97	14,641	838	13,803	3,165	4,085	21,054	398	13,923	6,733	0.02
1997/98	34,136	2,712	31,423	8,628	398	40,449	1,380	20,308	18,760	0.07
1998/99	12,477	744	11,733	12,466	1,380	25,579	1,024	10,167	14,387	0.05
1999/00	31,561	1,040	30,520	12,713	1,024	44,257	5,609	11,327	27,322	0.10
2000/01	18,052	639	17,414	11,650	5,609	34,673	1,398	14,701	18,574	0.07
2001/02	39,600	1,512	38,088	15,195	1,398	54,681	2,543	22,529	29,609	0.10
2002/03	15,600	338	15,262	16,387	2,543	34,192	2,447	9,929	21,815	0.08
2003/04	30,224	734	29,490	10,902	2,447	42,838	2,046	25,589	15,203	0.05
2004/05	28,548	1,359	27,189	12,768	2,046	42,004	1,945	21,687	18,372	0.06
2006/06	20,806	783	20,023	12,515	1,945	34,482	1,073	25,919	7,490	0.03
2006/07 6/	31,606	1,388	30,218	11,345	1,073	42,636	2,600	17,136	22,900	0.08

1/ Season beginning July. 2/Utilized production minus loss and exempt. 3/ U.S. Census Bureau, U.S. Department of Commerce.
4/ Hazelnut Marketing Board. 5/ Marketable production, plus imports, plus beginning beginning stocks. 6/ Preliminary estimates.
Source: USDA, Economic Research Service analysis.

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